Generation Interconnection

Feasibility Study Report

for

Queue Project AG1-028

SUFFOLK-HOLLAND 115 KV

0 MW Capacity / 0 MW Energy

January 2021

Table of Contents

1 Introduction 4
2 Preface 4
3 General 5
4 Point of Interconnection 6
4.1 Primary Point of Interconnection 6
4.2 Secondary Point of Interconnection 6
5 Cost Summary 6
6 Transmission Owner Scope of Work 7
7 Schedule 8
8 Transmission Owner Analysis 8
8.1 Power Flow Analysis 9
9 Interconnection Customer Requirements 9
9.1 System Protection 9
9.2 Compliance Issues and Interconnection Customer Requirements 9
9.3 Power Factor Requirements 10
10 Revenue Metering and SCADA Requirements 10
10.1 PJM Requirements 10
10.2 Interconnected Transmission Owner Requirements 10
11 Summer Peak - Load Flow Analysis 11
11.1 Generation Deliverability 12
11.2 Multiple Facility Contingency 12
11.3 Contribution to Previously Identified Overloads 12
11.4 Potential Congestion due to Local Energy Deliverability 12
11.5 System Reinforcements - Summer Peak Load Flow - Primary POI 14
11.6 Flow Gate Details 15
11.6.1 Index 1 16
11.7 Queue Dependencies 17
11.8 Contingency Descriptions 18
12 Short Circuit Analysis 20
12.1 System Reinforcements - Short Circuit 20
13 Affected Systems 21

14 Attachment 1: One Line Diagram 22

1 Introduction

This Feasibility Study has been prepared in accordance with the PJM Open Access Transmission Tariff, 36.2, as well as the Feasibility Study Agreement between the Interconnection Customer (IC), and PJM Interconnection, LLC (PJM), Transmission Provider (TP). The Interconnected Transmission Owner (ITO) is Dominion.

2 Preface

The intent of the feasibility study is to determine a plan, with ballpark cost and construction time estimates, to connect the subject generation to the PJM network at a location specified by the Interconnection Customer. The Interconnection Customer may request the interconnection of generation as a capacity resource or as an energy-only resource. As a requirement for interconnection, the Interconnection Customer may be responsible for the cost of constructing: (1) Direct Connections, which are new facilities and/or facilities upgrades needed to connect the generator to the PJM network, and (2) Network Upgrades, which are facility additions, or upgrades to existing facilities, that are needed to maintain the reliability of the PJM system.

In some instances a generator interconnection may not be responsible for 100% of the identified network upgrade cost because other transmission network uses, e.g. another generation interconnection, may also contribute to the need for the same network reinforcement. Cost allocation rules for network upgrades can be found in PJM Manual 14A, Attachment B. The possibility of sharing the reinforcement costs with other projects may be identified in the feasibility study, but the actual allocation will be deferred until the impact study is performed.

An Interconnection Customer with a proposed new Customer Facility that has a Maximum Facility Output equal to or greater than 100 MW shall install and maintain, at its expense, phasor measurement units (PMUs). See Section 8.5.3 of Appendix 2 to the Interconnection Service Agreement as well as section 4.3 of PJM Manual 14D for additional information.

The Feasibility Study estimates do not include the feasibility, cost, or time required to obtain property rights and permits for construction of the required facilities. The project developer is responsible for the right of way, real estate, and construction permit issues. For properties currently owned by Transmission Owners, the costs may be included in the study.

3 General

The Interconnection Customer (IC) has proposed an uprate to a planned/existing Storage generating facility located in Suffolk, Virginia. This project is an increase to the Interconnection Customer's AG1-027 project, which will share the same point of interconnection. The AG1-028 queue position is a 0 MW uprate (0 MW Capacity uprate) to the previous project. The total installed facilities will have a capability of 150 MW with 0 MW of this output being recognized by PJM as Capacity. The proposed in-service date for this uprate project is December 31, 2024. This study does not imply a TO commitment to this in-service date.

Queue Number	AG1-028
Project Name	SUFFOLK-HOLLAND 115 KV
State	Virginia
County	City of Suffolk
Transmission Owner	Dominion
MFO	150
MWE	0
MWC	0
Fuel	Storage
Basecase Study Year	2024

Any new service customers who can feasibly be commercially operable prior to June 1st of the basecase study year are required to request interim deliverability analysis.

4 Point of Interconnection

4.1 Primary Point of Interconnection

AG1-028 "Suffolk-Holland 115 kV" will interconnect with the Dominion transmission system as an uprate to AG1-027, sharing the POI and Attachment Facilities.

The IC is responsible for securing right-of-way, permits, and constructing the proposed attachment line from the generating facility site to the Point of Interconnection. The IC may not install any facilities on Dominion's right-of-way without first obtaining the necessary approval from Dominion Energy.

Costs provided are contingent on the AG1-027 project being built. Should the AG1-027 project withdraw from the Interconnection Queue, the AG1-028 project will assume the Attachment, Direct Connection, and Non-Direct Connection costs identified in the AG1-027 study report for connection to the Dominion system.

Attachment 1 shows a one-line diagram of the proposed interconnection facilities.

4.2 Secondary Point of Interconnection

There is no secondary point of interconnection specified for AG1-028.

5 Cost Summary

The AG1-028 project will be responsible for the following costs:

Description	Total Cost
Total Physical Interconnection Costs	$ 0
Total System Network Upgrade Costs	$8,100,000[1]
Total Costs	$8,100,000

This cost excludes a Federal Income Tax Gross Up charges. This tax may or may not be charged based on whether this project meets the eligibility requirements of IRS Notice 2016-36, 2016-25 I.R.B. (6/20/2016). If at a future date it is determined that the Federal Income Tax Gross charge is required, the Transmission Owner shall be reimbursed by the Interconnection Customer for such taxes.

Cost allocations for any System Upgrades will be provided in the System Impact Study Report.

[1] This project currently causes and/or contributes to overloads of the Transmission System (see Summer Peak Load Flow Analysis section below) and therefore has potential to have cost allocation for the system reinforcements listed in the report. This will be re-evaluated in the System Impact phase. The results may vary with queue customers withdrawing from the queue and other generators deactivating over time. If a customer is the first to cause the need for a project (causes loading to exceed 100% of rating), then the customer is responsible. If a customer contributes to a facility that is already overloaded by a prior queue, then they may receive cost allocation.

6 Transmission Owner Scope of Work

The required Attachment Facilities, Direct Connection and Non-Direct Connection work for the interconnection of AG1-028 to the Dominion Transmission System is detailed in the following sections. The associated one-line showing the generation project attachment facilities and primary direct and non-direct connection is shown in Attachment 1.

Note that the ITO findings were made from a conceptual review of this project. A more detailed review of the connection facilities and their cost will be identified in a future study phase. Further note that the cost estimate data contained in this document should be considered high level estimates since it was produced without a detailed engineering review. The applicant will be responsible for the actual cost of construction. ITO herein reserves the right to return to any issues in this document and, upon appropriate justification, request additional monies to complete any reinforcements to the transmission systems.

There are no physical interconnection costs associated with this project.

AG1-028 "Suffolk-Holland 115 kV" will interconnect with the Dominion transmission system as an uprate to AG1-027, sharing the POI and Attachment Facilities.

As AG1-028 is sharing the POI and Attachment Facilities with AG1-027, there are no associated interconnection costs for this project. Should the AG1-027 project withdraw from the Interconnection Queue, the AG1-028 project will assume the Attachment, Direct Connection, and Non-Direct Connection costs identified in the AG1-027 study report for connection to the Dominion system.

Remote Terminal Work: During the Facilities Study, ITO's System Protection Engineering Department will review transmission line protection as well as anti-islanding required to accommodate the new generation and interconnection substation. System Protection Engineering will determine the minimal acceptable protection requirements to reliably interconnect the proposed generating facility with the transmission system. The review is based on maintaining system reliability by reviewing ITO's protection requirements with the known

7 Schedule

Based on the scope of work for the interconnection facilities, it is expected to take a minimum of 18-30 months after the signing of an Interconnection Construction Service Agreement and construction kickoff call to complete the installation. This assumes that there will be no environmental issues with any of the new properties associated with this project, that there will be no delays in acquiring the necessary permits for implementing the defined Direct Connection and network upgrades, and that all transmission system outages will be allowed when requested.

If the customer is ultimately responsible for network upgrades, then the schedule for those upgrades will be refined in future study phases. The customer would need to wait for those upgrades to be completed prior to commercial operation unless determined deliverable by an interim deliverability study. The elapsed time to complete any network upgrades is provided in the System Reinforcements table of this report.

8 Transmission Owner Analysis

Dominion assessed the impact of the proposed project for compliance with NERC Reliability Criteria on the Dominion Transmission System. The system was assessed using the summer 2024 AG1 case provided to Dominion by PJM.

When performing a generation analysis, Dominion's main analysis includes load flow study results following a single contingency event for both normal and stressed system conditions. Dominion Criteria considers a transmission facility overloaded if it exceeds 94% of its emergency rating under normal and stressed system conditions. A full listing of Dominion's Planning Criteria and interconnection requirements can be found in the Company's Facility Connection Requirements which are publicly available at: http://www.dominionenergy.com.

The results of these studies evaluate the system under a limited set of operating conditions and do not guarantee the full delivery of the capacity and associated energy of this proposed generation facility under all operating conditions. NERC Planning and Operating Reliability Criteria allow for the re-dispatch of generating units to resolve projected and actual deficiencies in real time and planning studies. Specifically, in Planning Studies, NERC Planning Event 3 and 6 Contingency Conditions (Loss of generator, transmission circuit, transformer, shunt device, or Single Pole of a DC line followed by the loss of a generator, transmission circuit, transformer, shunt device or single pole of a DC line) allow for re-dispatch of generating units to resolve potential reliability deficiencies. For Dominion Planning Criteria the re-dispatch of generating units for these contingency conditions is allowed as long as the projected loading does not exceed 100% of a facility Load Dump Rating.

8.1 Power Flow Analysis

PJM performed a power flow analysis of the transmission system using a 2024 summer peak load flow model and the results were verified by Dominion. Additionally, Dominion performed an analysis of its transmission system and no further deficiencies were identified.

9 Interconnection Customer Requirements

9.1 System Protection

The IC must design its Customer Facilities in accordance with all applicable standards, including the standards in Dominion's "Dominion Energy Electric Transmission Generator Interconnection Requirements" documented in Dominion's Facility Interconnection Requirements "Exhibit C" located at: https://www.dominionenergy.com/company/moving-energy/electric-transmission-access. Preliminary Protection requirements will be provided as part of the Facilities Study. Detailed Protection Requirements will be provided once the project enters the construction phase.

9.2 Compliance Issues and Interconnection Customer Requirements

The proposed Customer Facilities must be designed in accordance with Dominion's "Dominion's Facility Interconnection Requirements" document located at: https://www.dominionenergy.com/company/moving-energy/electric-transmission-access. In particular, the IC is responsible for the following:

1. The purchase and installation of a fully rated protection device (circuit breaker, circuit switcher, fuse) to protect the IC's GSU transformer(s).
2. The purchase and installation of the minimum required Dominion generation interconnection relaying and control facilities as described in the System Protection section noted above. This includes over/under voltage protection, over/under frequency protection, and zero sequence voltage protection relays.
3. The purchase and installation of supervisory control and data acquisition ("SCADA") equipment to provide information in a compatible format to the Dominion Transmission System Control Center.
4. Compliance with the Dominion and PJM generator power factor and voltage control requirements.

The GSU(s) associated with the IC queue request shall meet the grounding requirements as noted in Dominion's "Dominion's Facility Interconnection Requirements" document located at: https://www.dominionenergy.com/company/moving-energy/electric-transmission-access.

The IC will also be required to meet all PJM, SERC, and NERC reliability criteria and operating procedures for standards compliance. For example, the IC will need to properly locate and report the over and under voltage and over and under frequency system protection elements for its units as well as the submission of the generator model and protection data required to satisfy the PJM and SERC audits. Failure to comply with these requirements may result in a disconnection of service if the violation is found to compromise the reliability of the Dominion system.

9.3 Power Factor Requirements

The IC shall design its non-synchronous Customer Facility with the ability to maintain a power factor of at least 0.95 leading (absorbing VARs) to 0.95 lagging (supplying VARs) measured at the high-side of the facility substation transformer(s) connected to the Dominion transmission system.

10 Revenue Metering and SCADA Requirements

10.1 PJM Requirements

The Interconnection Customer will be required to install equipment necessary to provide Revenue Metering (KWH, KVARH) and real time data (KW, KVAR) for IC's generating Resource. See PJM Manuals M-01 and M-14D, and PJM Tariff Section 8 of Attachment O.

10.2 Interconnected Transmission Owner Requirements

The IC will be required to comply with all Interconnected Transmission Owner's revenue metering requirements for generation interconnection customers located at the following link:

http://www.pjm.com/planning/design-engineering/to-tech-standards/

11 Summer Peak - Load Flow Analysis

The Queue Project AG1-028 was evaluated as a 0.0 MW (Capacity 0.0 MW) injection and 120 MWs of storage charging as an uprate to AG1-027 which is tapping the Suffolk-Holland 115 kV line in the Dominion area. Project AG1-028 was evaluated for compliance with applicable reliability planning criteria (PJM, NERC, NERC Regional Reliability Councils, and Transmission Owners). Project AG1-028 was studied with a commercial probability of 53.0 %. Potential network impacts were as follows:

11.1 Generation Deliverability

(Single or N-1 contingencies for the Capacity portion only of the interconnection)

None

11.2 Multiple Facility Contingency

(Double Circuit Tower Line, Fault with a Stuck Breaker, and Bus Fault contingencies for the full energy output)

None

11.3 Contribution to Previously Identified Overloads

(This project contributes to the following contingency overloads, i.e. "Network Impacts", identified for earlier generation or transmission interconnection projects in the PJM Queue)

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC|DC	MW IMPACT
166877181	316079	AB2-161 TAP	115.0	DVP	313879	3BELL AVE 2	115.0	DVP	1	DVP_P7-1: LN 97-121	tower	136.0	118.7	121.9	DC	8.2

11.4 Potential Congestion due to Local Energy Deliverability

PJM also studied the delivery of the energy portion of this interconnection request. Any problems identified below are likely to result in operational restrictions to the project under study. The developer can proceed with network upgrades to eliminate the operational restriction at their discretion by submitting a Merchant Transmission Interconnection request.

Note: Only the most severely overloaded conditions are listed below. There is no guarantee of full delivery of energy for this project by fixing only the conditions listed in this section. With a Transmission Interconnection Request, a subsequent analysis will be performed which shall study all overload conditions associated with the overloaded element(s) identified.

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC|DC	MW IMPACT
168306697	313720	3NEWSOMS	115.0	DVP	314526	3HANDSOM	115.0	DVP	1	DVP_P1-2: LN 136	operation	280.119995117	105.74	111.84	DC	17.07
168306541	313737	3COPELDDP	115.0	DVP	961850	AG1-027 TAP	115.0	DVP	1	DVP_P1-2: LN 1010	operation	269.779998779	135.05	139.69	DC	12.54
168306543	313737	3COPELDDP	115.0	DVP	961850	AG1-027 TAP	115.0	DVP	1	Base Case	operation	247.220001221	112.77	120.81	DC	19.88
168306405	313879	3BELL AVE 2	115.0	DVP	314528	3IVOR106	115.0	DVP	1	Base Case	operation	110.919998169	96.59	100.9	DC	9.0
169308236	314273	3BAKRS P	115.0	DVP	316079	AB2-161 TAP	115.0	DVP	1	DVP_P1-2: LN 44-A	operation	110.919998169	113.84	118.65	DC	10.07
169308238	314273	3BAKRS P	115.0	DVP	316079	AB2-161 TAP	115.0	DVP	1	Base Case	operation	110.919998169	100.21	104.52	DC	9.0

ID	FROM BUS#	FROM BUS	kV	FROM BUS AREA	TO BUS#	TO BUS	kV	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC|DC	MW IMPACT
168607375	314280	3NEWBOHE	115.0	DVP	314273	3BAKRS P	115.0	DVP	1	DVP_P1-2: LN 544-A	operation	110.919998169	115.28	119.79	DC	9.45
168607377	314280	3NEWBOHE	115.0	DVP	314273	3BAKRS P	115.0	DVP	1	Base Case	operation	110.919998169	101.0	105.05	DC	9.0
168607313	314329	3POE	115.0	DVP	314280	3NEWBOHE	115.0	DVP	1	DVP_P1-2: LN 544-A	operation	110.919998169	125.65	130.16	DC	9.45
168607315	314329	3POE	115.0	DVP	314280	3NEWBOHE	115.0	DVP	1	Base Case	operation	110.919998169	111.46	115.51	DC	9.0
168607127	314524	3FRNKLN	115.0	DVP	314539	3UNCAMP	115.0	DVP	1	DVP_P1-2: LN 136	operation	224.660003662	157.07	164.68	DC	17.1
168607129	314524	3FRNKLN	115.0	DVP	314539	3UNCAMP	115.0	DVP	1	Base Case	operation	224.660003662	124.86	133.71	DC	19.88
168607387	314526	3HANDSOM	115.0	DVP	314534	3S HAMPT	115.0	DVP	1	DVP_P1-2: LN 136	operation	280.119995117	104.81	110.91	DC	17.07
168607173	314527	3HOLLAND	115.0	DVP	313737	3COPELDDP	115.0	DVP	1	DVP_P1-2: LN 1010	operation	269.779998779	138.53	143.18	DC	12.54
168607175	314527	3HOLLAND	115.0	DVP	313737	3COPELDDP	115.0	DVP	1	Base Case	operation	247.220001221	116.62	124.66	DC	19.88
168606998	314532	3OAKRI23	115.0	DVP	314536	3SUFFOLK	115.0	DVP	1	Base Case	operation	110.919998169	106.99	111.3	DC	9.0
168607246	314534	3S HAMPT	115.0	DVP	314541	3WATKINS	115.0	DVP	1	DVP_P1-2: LN 136	operation	269.779998779	125.28	131.62	DC	17.1
168607248	314534	3S HAMPT	115.0	DVP	314541	3WATKINS	115.0	DVP	1	Base Case	operation	247.220001221	108.33	116.37	DC	19.88
168907684	314539	3UNCAMP	115.0	DVP	938770	AE1-103 TAP	115.0	DVP	1	DVP_P1-2: LN 1010	operation	224.660003662	152.98	158.56	DC	12.54
168907686	314539	3UNCAMP	115.0	DVP	938770	AE1-103 TAP	115.0	DVP	1	Base Case	operation	224.660003662	123.64	132.48	DC	19.88
168607351	314541	3WATKINS	115.0	DVP	314524	3FRNKLN	115.0	DVP	1	DVP_P1-2: LN 136	operation	269.779998779	110.41	116.75	DC	17.1
168607353	314541	3WATKINS	115.0	DVP	314524	3FRNKLN	115.0	DVP	1	Base Case	operation	247.220001221	92.08	100.12	DC	19.88
168907584	314589	3MURPHYS	115.0	DVP	964800	AG1-343 TAP	115.0	DVP	1	Base Case	operation	116.559997559	141.5	144.52	DC	6.64
168306532	316079	AB2-161 TAP	115.0	DVP	313879	3BELL AVE 2	115.0	DVP	1	DVP_P1-2: LN 121	operation	110.919998169	145.17	149.09	DC	8.2
168306534	316079	AB2-161 TAP	115.0	DVP	313879	3BELL AVE 2	115.0	DVP	1	Base Case	operation	110.919998169	129.92	134.22	DC	9.0
168606995	932590	AC2-079 TAP	115.0	DVP	314532	3OAKRI23	115.0	DVP	1	Base Case	operation	110.919998169	126.38	130.68	DC	9.0
169526764	938770	AE1-103 TAP	115.0	DVP	314527	3HOLLAND	115.0	DVP	1	DVP_P1-2: LN 1010	operation	224.660003662	170.54	176.12	DC	12.54
169526766	938770	AE1-103 TAP	115.0	DVP	314527	3HOLLAND	115.0	DVP	1	Base Case	operation	224.660003662	132.47	141.31	DC	19.88
168907537	964800	AG1-343 TAP	115.0	DVP	314558	3BOYKINS	115.0	DVP	1	Base Case	operation	116.559997559	141.41	144.43	DC	6.64

11.5 System Reinforcements - Summer Peak Load Flow - Primary POI

ID	Idx	Facility	Upgrade Description	Cost
166877181	1	AB2-161 TAP 115.0 kV - 3BELL AVE 2 115.0 kV Ckt 1	DVP dom-381 (424) : Reconductor 13.5 miles of 115 kV Line 106 from AB2-161 Tap to Bell Avenue with 636 ACSR 150 C. Project Type : FAC Cost : $8,100,000 Time Estimate : 36-40 Months	$8,100,000
			TOTAL COST	$8,100,000

11.6 Flow Gate Details

The following indices contain additional information about each facility presented in the body of the report. For each index, a description of the flowgate and its contingency was included for convenience. The intent of the indices is to provide more details on which projects/generators have contributions to the flowgate in question. All New Service Queue Requests, through the end of the Queue under study, that are contributors to a flowgate will be listed in the indices. Please note that there may be contributors that are subsequently queued after the queue under study that are not listed in the indices. Although this information is not used "as is" for cost allocation purposes, it can be used to gage the impact of other projects/generators. It should be noted the project/generator MW contributions presented in the body of the report are Full MW Impact contributions which are also noted in the indices column named "Full MW Impact", whereas the loading percentages reported in the body of the report, take into consideration the PJM Generator Deliverability Test rules such as commercial probability of each project as well as the ramping impact of "Adder" contributions. The MW Impact found and used in the analysis is shown in the indices column named "Gendeliv MW Impact".

11.6.1 Index 1

ID	FROM BUS#	FROM BUS	FROM BUS AREA	TO BUS#	TO BUS	TO BUS AREA	CKT ID	CONT NAME	Type	Rating MVA	PRE PROJECT LOADING %	POST PROJECT LOADING %	AC|DC	MW IMPACT
166877181	316079	AB2-161 TAP	DVP	313879	3BELL AVE 2	DVP	1	DVP_P7-1: LN 97-121	tower	136.0	118.7	121.9	DC	8.2

Bus #	Bus	Gendeliv MW Impact	Type	Full MW Impact
314539	3UNCAMP	-1.5535	Adder	-1.83
316083	**AB2-161 C (Suspended)**	**6.0715**	**50/50**	**6.0715**
316084	**AB2-161 E (Suspended)**	**9.9061**	**50/50**	**9.9061**
932581	AC2-078 C O1	2.5258	50/50	2.5258
932582	AC2-078 E O1	4.1210	50/50	4.1210
934575	AD1-082 C	13.8365	50/50	13.8365
934576	AD1-082 E	7.8929	50/50	7.8929
938634	AE1-085 C	14.1870	50/50	14.1870
938635	AE1-085 E	7.0935	50/50	7.0935
939195	AE1-149 C	8.4300	50/50	8.4300
939196	AE1-149 E	5.6200	50/50	5.6200
940063	AE2-000B BAT	64.7910	50/50	64.7910
940651	AE2-052	2.8100	50/50	2.8100
961853	AG1-028 BAT	4.3483	Merchant Transmission	4.3483
966731	AG1-544 C	11.0800	50/50	11.0800
966732	AG1-544 E	5.9444	50/50	5.9444
966741	AG1-545 C	1.4763	50/50	1.4763
966742	AG1-545 E	0.7915	50/50	0.7915
G-007A	G-007A	0.1151	Confirmed LTF	0.1151
VFT	VFT	0.3096	Confirmed LTF	0.3096
CALDERWOOD	CALDERWOOD	0.0368	Confirmed LTF	0.0368
PRAIRIE	PRAIRIE	0.1033	Confirmed LTF	0.1033
CHEOAH	CHEOAH	0.0380	Confirmed LTF	0.0380
CBM-N	CBM-N	0.0564	Confirmed LTF	0.0564
COTTONWOOD	COTTONWOOD	0.1302	Confirmed LTF	0.1302
HAMLET	HAMLET	0.0959	Confirmed LTF	0.0959
GIBSON	GIBSON	0.0153	Confirmed LTF	0.0153
BLUEG	BLUEG	0.0451	Confirmed LTF	0.0451
TRIMBLE	TRIMBLE	0.0145	Confirmed LTF	0.0145
CATAWBA	CATAWBA	0.0445	Confirmed LTF	0.0445

11.7 Queue Dependencies

The Queue Projects below are listed in one or more indices for the overloads identified in your report. These projects contribute to the loading of the overloaded facilities identified in your report. The percent overload of a facility and cost allocation you may have towards a particular reinforcement could vary depending on the action of these earlier projects. The status of each project at the time of the analysis is presented in the table. This list may change as earlier projects withdraw or modify their requests.

Queue Number	Project Name	Status
AB2-161	Waverly #2 DP 115kV	Suspended
AC2-078	Disputanta-Waverly 115kV	Engineering and Procurement
AD1-082	Bakers Pond-Ivor 115kV	Engineering and Procurement
AE1-085	Bakers Pond-Bell Ave 115 kV	Active
AE1-149	Disputanta-Poe 115 kV	Active
AE2-000B	N/A	N/A
AE2-052	Disputanta-Poe 115 kV	Active
AG1-028	Suffolk-Holland 115 kV	Active
AG1-544	Bakers Pond DP 115 kV	Active
AG1-545	W. Quaker Rd-Disputanta 34.5 kV	Active

11.8 Contingency Descriptions

Contingency Name	Contingency Definition
DVP_P1-2: LN 544-A	CONTINGENCY 'DVP_P1-2: LN 544-A' OPEN BRANCH FROM BUS 314902 TO BUS 939410 CKT 1 /* 8CARSON 500.00 - AE1-173_POI 500.00 OPEN BRANCH FROM BUS 314928 TO BUS 939410 CKT 1 /* 8SUFFOLK 500.00 - AE1-173_POI 500.00 OPEN BUS 939410 /* ISLAND: AE1-173_POI 500.00 OPEN BUS 939411 /* ISLAND: AE1-173_MAIN500.00 OPEN BUS 939412 /* ISLAND: AE1-173_SEC 34.500 OPEN BUS 939413 /* ISLAND: AE1-173_COL 34.500 OPEN BUS 939414 /* ISLAND: AE1-173_C1 0.5500 OPEN BUS 939415 /* ISLAND: AE1-173_C2 0.5500 OPEN BUS 939416 /* ISLAND: AE1-173_C3 0.5500 OPEN BUS 939417 /* ISLAND: AE1-173_TER113.800 OPEN BUS 939418 /* ISLAND: AE1-173_TER213.800 OPEN BUS 939419 /* ISLAND: AE1-173_TER313.800 OPEN BUS 939423 /* ISLAND: AE1-173_E1 0.5500 OPEN BUS 939424 /* ISLAND: AE1-173_E2 0.5500 OPEN BUS 939425 /* ISLAND: AE1-173_E3 0.5500 END
DVP_P7-1: LN 97-121	CONTINGENCY 'DVP_P7-1: LN 97-121' /* . OPEN BRANCH FROM BUS 314291 TO BUS 314297 CKT 1 /* 3PRGEORG 115.00 - 3F LEE97 115.00 OPEN BRANCH FROM BUS 314297 TO BUS 314340 CKT 1 /* 3F LEE97 115.00 - 3SISISKY 115.00 OPEN BRANCH FROM BUS 314302 TO BUS 314342 CKT 1 /* 3HARVELL 115.00 - 3TEMPLE 115.00 OPEN BRANCH FROM BUS 314340 TO BUS 314342 CKT 1 /* 3SISISKY 115.00 - 3TEMPLE 115.00 OPEN BUS 314297 /* ISLAND: 3F LEE97 115.00 OPEN BUS 314340 /* ISLAND: 3SISISKY 115.00 OPEN BUS 314342 /* ISLAND: 3TEMPLE 115.00 OPEN BRANCH FROM BUS 314291 TO BUS 314329 CKT 1 /* 3PRGEORG 115.00 - 3POE 115.00 END
DVP_P1-2: LN 1010	CONTINGENCY 'DVP_P1-2: LN 1010' OPEN BRANCH FROM BUS 313723 TO BUS 314559 CKT 1 /* 3PECAN 115.00 - 3CAROLNA 115.00 OPEN BRANCH FROM BUS 314559 TO BUS 314835 CKT 1 /* 3CAROLNA 115.00 - 3CAROL_1 115.00 OPEN BUS 314835 /* ISLAND: 3CAROL_1 115.00 END
DVP_P1-2: LN 121	CONTINGENCY 'DVP_P1-2: LN 121' OPEN BRANCH FROM BUS 314291 TO BUS 314329 CKT 1 /* 3PRGEORG 115.00 - 3POE 115.00 END

Contingency Name	Contingency Definition
DVP_P1-2: LN 136	CONTINGENCY 'DVP_P1-2: LN 136' OPEN BRANCH FROM BUS 314551 TO BUS 314568 CKT 1 /* 3AHOSKIE 115.00 - 3EARLEYS 115.00 OPEN BRANCH FROM BUS 314551 TO BUS 314617 CKT 1 /* 3AHOSKIE 115.00 - 3TUNIS 115.00 OPEN BUS 314551 /* ISLAND: 3AHOSKIE 115.00 OPEN BUS 316140 /* ISLAND: AB2-099 C 115.00 OPEN BUS 316141 /* ISLAND: AB2-099 E 115.00 END
Base Case	
DVP_P1-2: LN 44-A	CONTINGENCY 'DVP_P1-2: LN 44-A' OPEN BRANCH FROM BUS 313803 TO BUS 314531 CKT 1 /* 3OAKRI44 115.00 - 3MYRTLE 115.00 OPEN BRANCH FROM BUS 313803 TO BUS 314536 CKT 1 /* 3OAKRI44 115.00 - 3SUFFOLK 115.00 OPEN BRANCH FROM BUS 314531 TO BUS 936660 CKT 1 /* 3MYRTLE 115.00 - AD2-085 TAP 115.00 OPEN BRANCH FROM BUS 314536 TO BUS 314823 CKT 1 /* 3SUFFOLK 115.00 - 3SUFFO_1 115.00 OPEN BUS 313803 /* ISLAND: 3OAKRI44 115.00 OPEN BUS 314531 /* ISLAND: 3MYRTLE 115.00 OPEN BUS 314823 /* ISLAND: 3SUFFO_1 115.00 END

12 Short Circuit Analysis

The following Breakers are overdutied

Bus Number	Bus Name	BREAKER	Type	Capacity (Amps)	Duty Percentage Post Queue	Duty Percentage Pre Queue

12.1 System Reinforcements - Short Circuit

13 Affected Systems

None

14 Attachment 1: One Line Diagram